E. SUMMARY - The WSMC BASELINE ASSESSMENT follows:

1. Trajectories - Launch azimuths for orbital missions are normally limited to those between 147° and 213°; however, launches outside these limits may be allowed if mission priorities dictate.

Impact ranges for ballistic missiles vary, depending on mission and safety requirements. No established or documented limits exist; however, safety factors such as impacts occurring in violation of international territorial waters or overflight of populated land masses are not permitted.

- **2. Flight Termination System** The WSMC requirements, procedures and systems provide an adequate method of providing public protection from errant ELV's.
- **3. Flight Safety Procedures & Data Systems** The WSMC public protection procedures and data systems provide assured public protection for off-range events.
- **4. Staffing** The WSMC safety staff is well qualified and the Range Safety Officer training and certification process is more than adequate.
- **5. Instrumentation** Tracking radars, telemetry and command destruct capabilities exist from lift-off until orbital insertion (depending upon vehicle and trajectory). Instrumentation limitations may be expanded by the use of mobile units such as ARIA aircraft and Range Instrumented Ship (Observation Island), and the instrumentation of other agencies.
- **6. Vehicle Size** The WTR can accommodate any size launch vehicle in the present inventory as well as most of those that are planned for the foreseeable future; however, heavier launch vehicles which require new launch complexes might cause a siting problem.

REFERENCES

- 1. U.S.A.F., <u>Launch Vandenberg AFB</u>, 1985; Armed Services Press, 2904 Rubidoux Blvd, Riverside, California 92509.
- 2. U.S.A.F., <u>SAMTO Commanders Notebook</u>, 1986; Space and Missile Test Organization, Vandenberg AFB, California 93437.
- 3. U.S.A.F., <u>Range Safety Regulation WSMC 127-1</u>, 1985; Directorate of Safety, WSMC/SE, Vandenberg AFB, California 93437.
- 4. U.S.A.F., WSMC/SE Provided, Directorate of Safety, Vandenberg AFB, California 93437.
- 5. U.S.A.F., AFSC Design Handbook 1-6, 1982.
- 6. U.S.A.F., <u>SAMTO Technical Director's Handbook</u>, 1985; Space and Missile Test Organization, Vandenberg AFB, California 93437.
- 7. U.S.A.F., <u>WSMCR 127-2</u>, <u>VOL. 2</u>, 1985; Directorate of Safety, WSMC/SE, Vandenberg AFB, California 93437.
- 8. Personal knowledge of the following RTI staff: Loyd Parker, John Atkins,
- George Meyer, Jerry Watson, Jim Stephenson, Roy Geisinger and Gerald Bieringer.
- 9. U.S.A.F., <u>WSMC Landbased Instrumentation Systems</u>, 1987; Federal Electric Company, Vandenberg AFB, California 93437.
- 10. U.S.A.F., <u>The Sky is Not Our Limit</u>, Not Dated; Western Space and Missile Center, Directorate of Plans, Programs and Requirements, Vandenberg AFB, California 93437.
- 11. U.S.A.F., <u>Systems Performance and Accuracy Report</u>, 1987; WSMC Vandenberg AFB, California 93437.
- 12. U.S.A.F., <u>Western Test Range Users Handbook</u>, 1987; Commander, Western Test Range, Vandenberg AFB, California 93437.
- 13. "Forecast and Inventory: Space", <u>Aviation Week and Space Technology</u>, p. 155, March 1988.
- 14. U.S.A.F., <u>Range Safety Hazard Analysis</u>, 1976; Fairchild Space and Electronics Company, Germantown, Maryland.
- 15. U.S.A.F., <u>Flight Termination System Report (ATLAS E/F)</u>, 1973; General Dynamics, Convair Aerospace Division, San Diego, California.
- 16. U.S.A.F., Delta Missile System Pre-launch Safety Plan, Undated, ESMC
- 17. U.S.A.F, <u>Delta Range Safety Flight Termination System Report</u>, 1981; MDAC, Huntington Beach Cal., 92647.
- 18. NASA, Range Operations Directive for the Air Force Scout, 1985, WFF, Wallops, V.A.
- 19. U.S.A.F., <u>Flight Termination System Report (NASA/DOD SCOUT)</u>, 1981; Vought Corporation, Vandenberg AFB, California 93437.
- 20. U.S.A.F., <u>Titan 34D Missile Systems Pre-launch Safety Plan</u>, Undated; Missile Systems Safety Division, Patrick AFB, FL 32925
- 21. U.S.A.F., Flight Termination System Data Report 1982; Martin Marietta, Denver, Colorado, 80201.
- 22. U.S.A.F., <u>Range Safety Officer Training and Certification (OI50-1)</u>, 1987; WSMC Missile Flight Control Division, Vandenberg AFB, California 93437.
- 23. U.S.A.F., <u>Range Missile Control Representative Training and Certification</u>, 1987; WSMC Missile Flight Control Division, Vandenberg AFB, California 93437.

- 24. U.S.A.F., <u>Range Safety Surveillance (WSMCR 127-11)</u>, 1981; WSMC Safety Analysis Branch, Vandenberg AFB, California 93437.
- 25. U.S.A.F., <u>AFR 127-100, Explosives Safety Standards</u>, 20 May 1983, Department of the Air Force, Hq. USAF, Washington DC 20330.
- 26. NRC, <u>Emergency and Continuous Exposure Guidance Levels for Selected Airborne Contaminants</u>, 1985; National Research Council, Commission on Life Sciences, 2101 Constitution Ave., Washington, DC 20418
- 27. U.S.A.F., <u>Missile Launch Summary</u>, 1988; Missile Flight Control Division, Vandenberg AFB, California 93437.
- 28. U.S.A.F., <u>LARA Run for Titan Vehicle</u>, 1987; Missile Flight Control Division, Vandenberg AFB, California 93437.
- 29. U.S.A.F., <u>WSMC Missile Flight Control Operations Requirement</u>, 1984; Missile Flight Control Division, Vandenberg AFB, California 93437.
- 30. U.S.A.F./DOT, <u>VAFB Programmatic Environmental Assessment</u>, 1988; Office of Commercial Space Transportation, Washington, DC. 20590.
- 31. U.S.A.F., <u>Flight Safety Policy Briefing Charts</u>, 1986; Missile Flight Control Operations Branch, Vandenberg AFB, California 93437.
- 32. U.S.A.F., <u>LARA Run for Scout Vehicle</u>, 1987; Missile Flight Control Division, Vandenberg AFB, California 93437.
- 33. Martin Marietta, Titan Data (MCR-87-2614), 1987; Martin Marietta, Denver, CO. 80210
- 34. Martin Marietta, Titan Data (MCR-87-2585), 1987; Martin Marietta, Denver, CO. 80210
- 35. U.S.A.F., <u>LARA Input Data for Atlas</u>, 1988; Missile Flight Analysis Division, Vandenberg AFB, California 93437.
- 36. National Research Council, <u>Emergency and Continuous Exposure Guidance</u>
 <u>Levels for Selected Airborne Contaminants</u>, National Research Council, Commission of Life Sciences, 2101 Constitution Avenue, Washington, DC.
- 37. U.S.A.F., <u>Launch Risk Analysis (LARA)</u> for <u>Atlas</u>, 1988; WSMC Systems Analysis Branch, Vandenberg AFB, California 93437.
- 38. U.S.A.F., <u>Short Notice Sheriff's Support (OI 127-1)</u>, 1987; WSMC Safety Analysis Branch, Vandenberg AFB, California 93437.
- 39. U.S.A.F., <u>Missile Flight Control Mission Rules</u>, 1986; WSMC Missile Flight Control Division, Vandenberg AFB, California 93437.
- 40. CPIA, <u>Hazards of Chemical Rockets and Propellants</u>, 1984; The Chemical Propulsion Information Agency (CPIA).